

REMARKS

In view of the preceding amendments and the comments which follow, and pursuant to 37 C.F.R. § 1.111, amendment and reconsideration of the Advisory Action of December 29, 2003 is respectfully requested by Applicant.

Summary

Claims 1 – 10 stand rejected. Claims 1, 5, 6 and 10 are amended. Claims 11 – 14 have been added. Claims 2, 3, 4, and 7 - 9 are cancelled. No new matter has been introduced as a result of these amendments.

Claims 1, 5, 6, and 10 – 14 are pending following consideration and entry of the present amendments and remarks.

Substance of Interview

The interview with the Examiner, Ming Hun Liu, conducted on June 7, 2004 was initiated by the Applicant's agent, Kader Gacem, in response to the Advisory Action. The Examiner stated in the Advisory Action that Applicant's claimed limitation regarding a control section computing "a width of movable range ...from current to end of possible motion" and controlling "the output to the actuators according to the width of the movable range" is clearly anticipated by Levin's reference. Applicant's agent respectfully disagreed, and hereby submits an amendment to clarify the claims and remove any ambiguities. As such, Applicant is hereby responding to the Advisory Action remarks in conjunction with the previously submitted remarks in response to the Office Action of December 29, 2003.

Rejection under 35 U.S.C. § 102

The Examiner has rejected claim 1 – 10 under 35 U.S.C. § 102 (e) as being anticipated by Levin et al. (US Patent 6,154,210). The amended Claim 1 is directed to a vehicle-mounted input unit provided with a manual manipulator, position sensors, actuators, and a control section for controlling the actuators. Claim 1 now recites that "the control section computes an initial width of the movable range of the manual manipulator from a current position to an end of

its possible motion according to changes in position signals supplied from the position sensors, and controls the output to the actuators according to the computed initial width of the movable range." Thus, the configuration of claim 1 enables the output to the actuators to correspond to the computed initial width of the movable range of the manipulator. This feature is not disclosed or suggested by Levin et al. Hence, once computed on the basis of the initial width of the movable range, the output to the actuator is applied to the manual manipulator from the current position to an end of the manual manipulator possible motion according to position signals supplied from the position sensors.

As one specific example, the output to the actuators can be weakened when the computed initial width of the movable range of the manual manipulator from its current position to an end of its possible motion is wide or, conversely, can be emphasized when the movable range is narrow (page 8, lines 22 – 27). Such a feature is recited in Claims 11 and 12.

The Examiner indicated in the advisory Action that the width range computation and restriction is described in Levin's reference, namely in column 11, lines 54 – 67. However, Applicant respectfully disagrees. Levin et al. disclose "forces that simulate ends of travel for the knob or inform the user that the end of travel has been reached". This is to say that Levin et al. disclose that the end of travel forces are computed to simulate ends of travel of the knob rather than for any substantial remaining width of movable range of the manual manipulator from its current position.

Further, Levin et al. disclose, in the patent section pointed out by the Examiner in the Final Office Action, namely Column 10, lines 11 - 18, that "A basic force sensation is force detents that are output at particular rotational positions of the knob to inform the user how much the knob has rotated and/or to designate a particular position of the knob. The force detents can be simple jolts or bump forces to indicate the detents position, or the detents can include forces that attract the knob to the particular rotational detent position and resist movement of the knob away from that position" (column 10, lines 11 - 18). Thus, these force sensations that Levin et al. disclose as defined by jolts,

bumps and attraction or repulsion forces are not outputs to the actuators that are computed on the basis of the corresponding initial width of the movable range of the manual manipulator as provided by the position sensors. Specifically, Levin et al do not teach or suggest that the initial width of the movable range is computed from the current position of the manual manipulator to an end of its possible motion, and that the output to the actuators is controlled according to the computed initial width of the movable range.

In the Advisory Action, the Examiner pointed out that the Levin's reference also discloses a gradual resistive damping effect on the rotational knob on column 10, lines 54 – 67. As such, the disclosed damping force to slow down the knob changes gradually in resistance with the remaining width of the movable range. Therefore, Levin et al do not teach or suggest that the damping force is computed based on the initial width of the movable range from the current position.

Specifically, in this column 10, Levin et al also disclose that the force sensation outputted on a knob is a spring force, which can provide resistance to rotational movement of the knob in either direction to simulate a physical spring on the knob. In regard to the simulated spring force, Applicant submits that the resulting force typically increases continuously in resistance while the knob is rotated in either direction from a natural state of the corresponding spring. Thus, when the spring force is simulated on the knob, the resulting spring force resistance changes as the knob is rotated. In contrast, Applicant's computed output corresponds to the computed initial width of the movable range based on the current position to the end of possible motion. Thus, once computed based on the initial width of movable range (travel), the controlled output is applied to the manual manipulator for substantially the remaining width of the movable range.

Hence, based on the above discussions, Applicant submits that claim 1 is not anticipated by Levin et al.

Regarding the rejection of Claim 5, the amended claim 5 recites that "the control section computes an initial width of the movable range of the vehicle-

mounted electric device from a current position to an end of its possible motion according to changes in position signals supplied from the position sensors, and controls the output to the actuators according to the computed initial width of the movable range." Thus, the configuration of claim 5 enables the output to the actuators to correspond to the computed initial width of the movable range of the manipulator. This feature is not disclosed or suggested by Levin et al. Since the rejections of claim 5 are similar to claim 1, Applicant submits that the above remarks distinguishing claim 1 from the Levin's reference are applicable to claim 5. As such, claim 5 is not anticipated by Levin et al.

Therefore, Applicant submits that claims 1 and 5 are allowable, as well as their correspondingly dependent claims 6, and 10 - 14. Thus, Applicant earnestly requests that the rejections of claims 1, 5, 6, and 10 under 35 U.S.C. §102(e) be withdrawn.

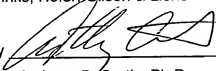
Conclusion

Applicant submits that this application is now in condition for allowance, and favorable reconsideration of this application in view of the above amendments and remarks is respectfully requested. If, there are additional fees due, Applicant requests that this paper constitutes any necessary petition and authorizes the Commissioner to charge any underpayment, or credit any overpayment, to Deposit Account No. 23-1925.

If the examiner finds that there are any outstanding issues which may be resolved by a telephone interview, the Examiner is invited to contact the undersigned at the below listed number

Respectfully submitted,

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